

**Amendments to the Drawing:**

The attached sheets of drawings include a change to **FIG. 1**. The first sheet replaces the original sheet. The second sheet highlights the change in red ink. To avoid confusion between “mobile receiver” **10** and “broadcast receiver” **22**, the latter is relabeled as “broadcast tuner”.

Attachment:        Replacement Sheet

                      Annotated Sheet Showing Changes

### **REMARKS/ARGUMENTS**

**Syntactical Corrections.** Applicant makes a few textual substitutions to the specification and claims, to eliminate points of ambiguity and typographical errors.

These changes are summarized as follows:

1. Applicant renames the “mobile receiver unit” to “mobile receiver” for brevity.
2. Applicant renames the “broadcast receiver” to “demodulator (broadcast tuner)” to eliminate the confusion with the “mobile receiver [[unit]]”.
3. Applicant removes the “interface for accessing said removable storage device” in claims **1** and **10**. Applicant rephrases the claims to state that the mobile receiver may read from or write to any operably linked, i.e. attached, storage device.

**Summary of Amended and New Claims.** In claims **3** and **16**, applicant replaces the phrase “software containing programs” with “instructions for said embedded computer to compute derivatives...” These instructions for computation are supported by paragraphs [0049] and [0060] with temperature scale conversion and simple stock price calculations as examples.

Applicant adds new dependent claims **17** and **18**, which state that the embedded computer within the mobile receiver may load another class of software from the removable storage device, namely firmware updates. These claims are supported by paragraph [0062].

Applicant amends claim **1** to include (canceled) claim **2** to emphasize that the mobile receiver’s ability to personalize data without loading external browser programs, and that the mobile receiver requires a removable storage device only to specify the user’s personalization parameters, e.g. user’s stock portfolio. This claim to automatic personalization without an external browser program is supported by the specification of the preferred embodiment in paragraphs [0047] and [0048]. Additional description of possible default behavior (preprogrammed into the embedded computer) is specified in

paragraph [0057]. Applicant does not claim the embodiment in which the built-in parser program may be overridden, as specified in paragraphs [0050] and [0069].

Applicant adds new claims **19-22**. Claim **19** is supported by the specification as a whole, and explicitly by paragraphs [0062] to [0066]. Claim **21** is supported by paragraphs [0049] and [0060]. Claims **20** and **22** are supported by paragraph [0051].

**Novelty of Present Invention.** The present invention, like many others including those cited by the Office Action, concerns the processing of data extracted from broadcast signals. In all these inventions an embedded computer, also called controller in some publications, is used to process the data demodulated by a tuner for storage, presentation and further computations. However, these inventions differ in many ways, including the types of compatible signals, the types of compatible broadcast programs, user interfaces, data throughput, technology and cost. For example, one novel aspect of the present invention is its continuous personalized data presentation without requiring user interaction. Some of the differences are summarized below.

1. The present invention personalizes unordered and unscheduled data elements within each broadcast program according to user-specific criteria. In contrast, other inventions, including personal/digital video recorders (PVR/DVR) such as TiVO and the proposed car stereo of Sezan's, merely concern the pre-selection of stations and scheduled programs.

2. The present invention supports unlimited number of concurrent active users and receivers by broadcasting common data; the personalization of data is performed by the receiver. Other inventions, such as stock pagers and text messaging over cellular networks, use bandwidth division techniques to send pre-personalized data from the transmitter to the receiver through traditionally broadcast frequencies. These other inventions limit the number of concurrent users.

3. The receiver of the present invention does not require user interaction once it is preconfigured, thus making it safe to use while operating a moving vehicle. Other receivers, such as those described in Inoue, are interactive in nature requiring the participation of the operator of a moving vehicle, making it unsafe to use.

**Prior Art.** The Office Action cites Inoue as prior art. Applicant explains major differences below and revises claims to reflect these differences.

**Inoue's device does not personalize data. There is no motivation provided in Inoue to construct and use the device and personalization process claimed in the present application.** Inoue's device is similar to the present invention in its hardware, namely the inclusion of a tuner, a computer, and usage of a removable storage device. By loading special programs it is able to play and store TV programs, web pages, images, music and stock quotes. As specified by Inoue, these programs decode and uncompress data rather than select data. Inoue's device and programs may display stock quotes, but said device and program are neither specified nor claimed by Inoue to be capable of automatically identifying and displaying only the stocks in the user's portfolio. Inoue rather specifies that the user choose favorite content and functionality interactively using the remote controller (Inoue, column 10, lines 58-65 and column 14, lines 26-29). Thus, the lack of motivation for automatic personalization in Inoue is evident.

**Furthermore, there is no means provided in Inoue to construct the device and personalization process claimed in the present invention.** Inoue's device includes a CPU and memory, as do other devices such as DVD players. However, also like DVD players, Inoue's device is programmable only in a limited way as it is not a general-purpose computer. Without explicit specifications, one cannot speculate that Inoue's specialized device can be programmed to update a personal stock portfolio continuously, or report local traffic conditions in a timely manner. Thus the lack of means to enable automatic personalization in Inoue is evident.

In contrast, applicant explicitly specifies the purpose of continuous data personalization, and a mobile device and associated means to achieve this purpose. Applicant amends claims **1** and **10**, and adds claim **19**, each stating that the mobile receiver chooses, automatically, among unordered and unscheduled data elements from broadcast according to preconfigured preferences of the user.

The automatic personalization of data is a novel feature in the present invention and is not obvious to any skilled person in the field so as to enable him to configure Inoue's device to achieve this goal. In fact, Inoue specifies no process for producing

suitable software or firmware compatible with the patented device to achieve any purpose, whether or not the purpose is mentioned by Inoue.

The Office Action cites the combination of Inoue, Sezan and Shimakawa as teaching an equivalent device to applicant's present invention. While it may be feasible to manufacture a mobile receiver similar to Inoue's that is compatible with Sezan's system description scheme, the combination of these cited references does not teach the present invention. Applicant explains below the impossibility of such a combination, and what differentiates the present invention from the combination of the cited references.

**It is not obvious to any skilled person how Inoue's device can be built to conform to Sezan's schemes.** As stated above, Inoue's device is not a general-purpose programmable computer. (If it were, Inoue's invention would be a computer with a TV tuner, not a special receiver device). The combination is not trivial because Inoue's receiver includes a special purpose computer that may have limited configurability and capability.

**Even if the combination can be built easily, it is not the same device as specified by applicant.** Granted, many inventions can be made to serve the same purpose. For example, a sundial and an atomic clock both serve the purpose of telling time. In this case, applicant's device and the supposed combination may both satisfy the purpose of pre-configured data personalization using a mobile receiver. However, one cannot find the motivation to combine the cited references in order to produce the claimed invention. In fact, these schemes as described in the cited references reduce data throughput unnecessarily. **Therefore the objection under Section 103 is invalid, as the inventions as specified obviously require different components.**

#### **The rejection of claim 1 on Inoue is overcome**

The Office Action rejected independent claim 1 over Inoue and Shimakawa. Applicant has revised claims 1 and 10, and added claim 19 to differentiate the present invention from Inoue's and Shimakawa's and any combinations thereof. Applicant requests reconsideration of this rejection for the following reasons.

1. Neither Inoue nor Shimakawa defines or discloses "personalization". While Inoue's invention is said to be capable of receiving data such as stock quotes, Inoue neither specifies nor claims any purpose, method or apparatus to update all stock prices in the user's portfolio, regularly and continuously. While Inoue specifies the patented device to load software to uncompress, playback and store contents, Inoue does not specify a means, purpose or device for automatically filtering of individual elements within said contents.

On the contrary, applicant teaches explicitly the goal to update every personal portfolio, every few minutes. Applicant further specifies other forms of personalized content services including sports, news, local traffic and local weather, all updated completely every few minutes. Applicant clarifies this major difference in claims **1, 10 and 19** by stating explicitly the method of personalization using preconfigured personalization parameters to choose among data elements within a broadcast program. **Thus, the present invention produces unexpected results not contemplated in Inoue.**

2. The personalization method of the present invention is a built-in component of the mobile receiver, independent of any software loaded from the removable storage device. That is, the personalization process is programmed persistently in the embedded computer. In contrast, Inoue requires that the browser program be loaded from an external device, and the browser program not be retained when the device is turned off (Inoue, claim 1, column 20, lines 13-15, and claim 3, lines 31-32, etc). **Therefore, the Section 103 rejection is overcome as the embedded computer of the present invention is structurally distinct from Inoue's, and furthermore, Inoue's specification and claims preclude any possibility of altering the structure of Inoue's device to resemble the present invention.**

3. Inoue's device is inherently interactive while the mobile receiver of the present invention is mostly non-interactive, as implied by the pre-configuration specification of the present invention in claims 1, 10 and 19.

**In summary, the present invention is new and unexpected in view of Inoue in terms of structure (personalization method preprogrammed into embedded**

**computer), functionality (automatic personalization without user interaction) and results (personalized data).**

**The rejections of claims 2-8 are overcome**

The Office Action rejected dependent claims 2-8 for the use of removable media, signal-ready alert, voice output and paced output. Application cancels claim 2 and requests reconsideration of claims 3-8 and claim 17 as they depend upon claim 1.

**The rejection of claim 9 on Hendricks is overcome**

The Office Action rejected claim 9 over Hendricks for the connection between the invention and a radio tuner. Applicant has revised claim 9 to distinguish the two inventions. Applicant requests reconsideration of this rejection based on the following distinction.

Hendricks' invention can be connected to a radio tuner via some interfaces such as cables. On the other hand, applicant's invention, as claimed, is a personalization module embedded within a car stereo. Applicant does not claim any embodiment in which the personalization module communicates with components of the car stereo through external connections.

**The rejections of claim 10 and 11 on Inoue and Shimakawa are overcome.**

The Office Action rejected claims 10 and 11 over Inoue and Shimakawa. Applicant has revised claim 10 to distinguish the present invention from the inventions of Inoue and Shimakawa and any combinations thereof. Applicant requests reconsideration of these rejections for the following reasons.

1. As explained previously, the mobile receiver is new and unexpected in view of Inoue in terms of structure, functionality and results.

2. The Office Action cites the remote controller of Inoue as the (user) interface for accessing the removable storage device. Applicant has revised the claims to clarify that the removable storage device can be connected to the embedded computer (through a device-to-device interface).

3. Inoue's invention consists of one physical entity that receives and processes data, and interacts with its user. In contrast, applicant's invention consists of two physically separable devices: an interactive computer and a mobile receiver. The interactive computer may or may not be mobile while the mobile receiver is preferably minimally interactive. The interactive computer programs a compact flash card that the user transports to the mobile receiver to personalize the data received.

4. It is conceivable that Inoue's device can be made mobile in view of Shimakawa, thus serving the purposes of both the mobile receiver and the interactive computer of the present invention. However, as stated previously, neither Inoue nor Shimakawa disclose a personalization system in which data elements are chosen by a device automatically.

**The rejections of claims 12 and 14 are overcome**

The Office Action rejected dependent claims **12** and **14** for the persistence of software to removable media. Applicant cancels claim **14** and requests reconsideration of claim **12** as it depends upon claim **10**.

**The rejection of claim 15 is moot**

Applicant cancels claim **15**, thus making the rejection moot.

**The rejection of claim 13 is overcome**

The Office Action rejected dependent claim **13** over Inoue, Shimakawa and Sezan for the synchronization of personalization parameters between Internet and broadcast. Applicant requests reconsideration of this claim as it specializes the invention of claim **10**, and for the following reasons.

1. As stated previously, Inoue and Shimakawa do not specify any personalization system.

2. As stated previously, the present invention is structurally distinct from Inoue's device. Furthermore, it is not obvious to any skilled person how Inoue's device may be modified to resemble the present invention.



3. The proposed combination of Inoue and Sezan does not teach the present invention. Such a combination requires a device that conforms to Sezan's system description scheme and programs that conform to Sezan's program description scheme. Applicant's invention requires and prefers neither scheme for reasons of efficiency and lack of need.

4. The combination cited by the Office Action does not personalize individual stock quotes and other data elements received by a car stereo. Sezan specifies the use of the user description scheme with a car stereo to personalize the selection of radio stations (Sezan column 11 lines 23-26). Thus it is not obvious that Sezan's user description scheme can be used with applicant's enhanced car stereo, i.e. mobile receiver, for the purpose of updating a personal stock portfolio, and presenting other types of personalized content.

5. The Office Action's proposed combination of Inoue, Shimakawa and Sezan is not obvious. Inoue's device includes an embedded computer with limited capacity. It is not obvious to any skilled person whether such a computer can be programmed or expanded to become compatible with Sezan's schemes.

#### **The rejection of claim 16 is overcome**

The Office Action rejected dependent claim 16 over Inoue for the programming of the removable storage device using a computer for use with the mobile receiver. Applicant requests reconsideration of this claim as it depends upon claim 10. Applicant further provides the following clarification.

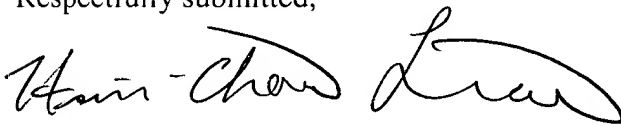
Applicant's invention involves a general computer that can be used to build software for the mobile receiver, and persist such software to the removable storage device. (An example of a simple program would be one that outputs the daily low price of a stock. The user does not need to build or purchase a general browser program or a decompression program as they are preprogrammed into receiver's embedded computer at the time of manufacture). Inoue's invention contains an embedded computer with limited capabilities. In particular, Inoue specifies that a browser program and a stock decoder program may be provided on a removable storage device (Inoue, column 10,

lines 31-39). However, Inoue does not at all specify how any such program can be built, whether or not by any device specified in Inoue's invention.

**Conclusion.** For all reasons stated above, applicant submits that all claims are patentable over prior art. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

**Conditional Request for Constructive Assistance.** Applicant has amended the specification and claims of this application so that they define novel structure that is unobvious. If, for any reason, this application is not in full condition for allowance, applicant respectfully requests the constructive assistance and suggestions of the Examiners pursuant to M.P.E.P Section 2173.02 and Section 707.07(j) in order that the applicant can place this application in allowable condition without further delay.

Respectfully submitted,



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Hsinchao Liao, September 29, 2005



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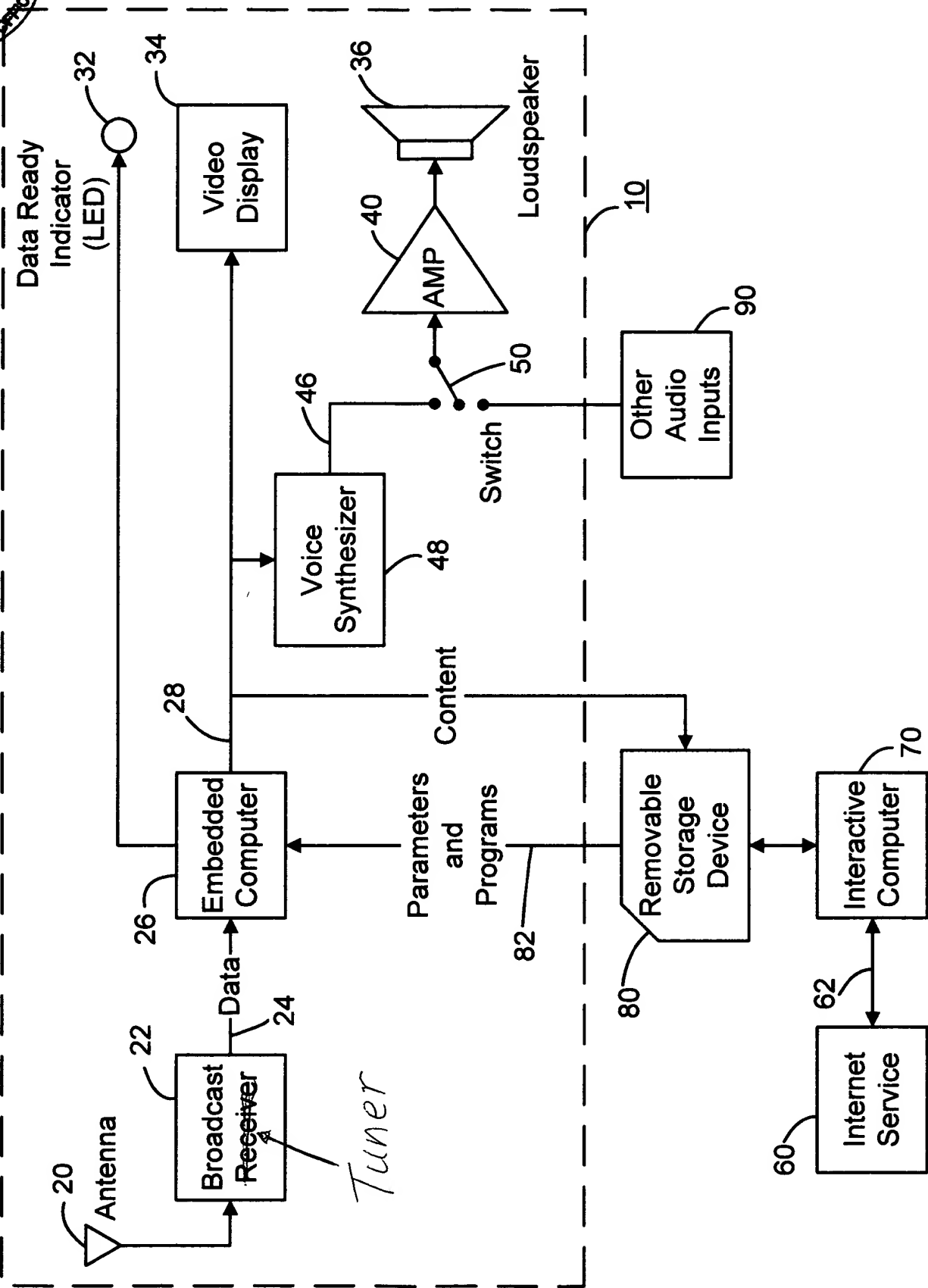


FIG. 1